

CURRICULUM VITAE

PROF. MAWUADEM KOKU AMEDEKER, Ph. D. (CPhys. MInstP.)

Chartered Physicist/Science Educationist

Associate Professor of Science and Technology Education

Department of Science Education

University of Education

P. O. Box 25

Winneba. Ghana. West Africa

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1. Personal Information

Marital Status: Married with two children

Date of Birth: 1st March, 1954

Place of Birth: Mepe, Volta Region

Nationality: Ghanaian

Religion: Roman Catholic

2. Promotion

Senior Lecturer

3rd June, 1999

Associate Professor

18th September, 2008

3. Educational Institutions and Qualifications

University	Subject	Title	Grade/Year
i. Edith Cowan University Perth, Western Australia	Science Educ.	Ph.D.	Pass (2008)
ii. The University of Manchester, U. K.	Theor. Physics	M. Sc.	Pass (1995)
iii. University of Cape Coast, Ghana	Physics/Mathematics	B. Sc.(Ed)	2 nd Class (Lower) 1977

4. Thesis Written

- The status and quality of continuous assessment in junior secondary science in Ghana. A Ph. D. thesis submitted to Edith Cowan University, Perth. Western Australia, (December, 2007).
- OZI rule violation in backward vector meson production. M.Sc. Dissertation submitted to the University of Manchester, Manchester, U. K. (April, 1995)

5. Area of Specialisation

- i. **Ph. D. level**
Assessment in science; Teacher professional development and teacher formation; Integration of modern technologies into science instruction
- ii. **Masters Degree level**
Theoretical Particle Physics; Phi – meson coupling to the nucleon; Theoretical exploration of new particle creation
- iii. **Bachelor degree level**
Teaching of Physics and Mathematics at senior high school level; Pedagogies for instruction at the senior high school level

6. Awards Received	Awarded By	Year
i. International Postgraduate Research Scholarship for Ph. D. (Science Educ.)	Edith Cowan University (Perth- Australia)	April, 2005 - Dec. 2007
ii. Visiting Associate to Institute of Theoretical Physics Beijing, - China.	Third World Academy of Science (ICTP- Italy)	Jul. – Sept. 2004
iii. Visiting Associate to Institute of Theoretical Physics Beijing, - China.	Third World Academy of science (ICTP- Italy)	Sept. – Nov. 2002
iv. Research grant for research on children's science literacy	AFCLIST Durban, South Africa	2002 - 2003
v. Research grant for evaluation of the Science Resource Centres in Ghana	Univ. of Education Winneba, Ghana.	2001 - 2003
vi. Research Grant for evaluation of continuous assessment	Univ. of Education and World Bank.	1997 - 1999
vii. Scholarship Award for studies in Manchester, U.K. for M. Sc.(Theor. Physics)	Ghana Government	Sept.1992 - April, 1995

7. Employment History

Institution	Position Held	Dates
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i. University of Education	Associate Prof	1992 - Date
ii. Kwame Nkrumah Univ. of Science and Technology, Kumasi	Sabbatical Leave	Oct. 2001 - Sept. 2002
iii. University of Education, Winneba	Lecturer	1995
iv. Advanced Teacher Training College Winneba	Physics Tutor	Feb. 1983 - Oct. 1992
v. Alamuwa Grammar School, Ado-Odo, Ogun State, Nigeria.	Physics Tutor	Oct. 1979 - Sept. 1982
vi. St. Peter's Secondary School, Nkwatia-Kwahu.	National Service Physics Tutor	Sept. 1978 - Sept. 1979

8. Ghana Education Services Grades Ranks

Dates

Promoted to Principal Superintendent	Sept. 1991
Promoted to Senior Superintendent	Sept. 1984
Appointed Superintendent	Sept. 1978

9. Published articles in refereed journals

- i. **Amedeker, M. K., & Tachie-Young, T.** (2012). Environmental hazard communication: Revisiting the indigenous methods to meet the challenges in Ghana. In A. Asabere-Ameyaw, G. J. S. Dei, & K. Raheem (Eds.), *Contemporary Issues in African Sciences and Science Education* (pp. 209 – 215). Rotterdam: Sense Publishers
- ii. **Hanson, R., Amedeker, M. K., Oppong, E., & Antwi, V.** (2011). Using microchemistry activities to improve pre-service teachers' conceptions of some chemistry topics. *International Journal of Educational Administration*, 3 (1), 19 – 40
- iii. **Amedeker, M. K.** (2010). Teacher professional development: Perspectives from Ghanaian junior secondary school science teachers. *Keffi Journal of Educational Studies*, 2 (1), 203 - 215
- iv. **Amedeker, M. K & Antwi, V.** (2007). Assessment practices used by physics teachers in senior secondary schools: Are our students informed? *International Journal of Education Studies*, 3 (1), 126 - 134
- v. **Nandi, K. K., N. G. Migranov, Evans, J. C. and Amedeker, M. K.** (2006). Planetary and light motions from Newtonian theory: An amusing exercise. *Eur. J. Phys.*, 27 (2), 429 – 435
- vi. **Amedeker, M.K.** (2005). Reforming Ghanaian teacher education towards preparing an effective pre-service teacher. *Journal of Education and Teaching*, 31 (2), 99 – 110

- vii. **Amedeker, M. K., & Abdul-Rahman, L.** (2005). The nature of formal reasoning among Ghanaian basic school pupils in general logic tasks. *African Journal of Educational Studies in Mathematics and Sciences*, 3, 9 - 19
- viii. **Amedeker, M. K., Li, Q.F.** (2005). On the coupling of Φ Meson to Nucleons and Backward Φ Production. *Commun.Theor.Phys. (Beijing China)*, 43 (3), 493 – 496.
- ix. **Amedeker, M. K.** (2004). The Dual mode of light. *Everyday Science for Schools*, 3(1), 15 – 17
- x. **Amedeker, M. K., Li, Q. F. and Zou, B. S.** (2003). Vector meson couplings to nucleons and backward ρ and ω production. *Commun.Theor.Phys. (Beijing China)*, 39 (6), 667 – 670.
- xi. **Amedeker, M. K. and Tamakloe, W. L.** (2003). Teaching and Assessing Affective skills in Science in Ghanaian Basic Schools. *Journal of the Ghana Science Association*, 5 (1), 163 – 173.
- xii. **Amedeker, M. K.** (2002). Science teacher trainees in a school attachment programme. *Journal of Education and Teaching (U.K)*, 28 (1), 61-71.
- xiii. **Aboagye, J. K., Atta-Boison, G. K. and Amedeker, M. K.** (2001). Is continuous assessment the panacea for pupil appraisal in junior secondary schools? *EDUCALERT – A periodic release of University College of Education of Winneba*, 2(1), 1 – 3
- xiv. **Amedeker, M. K.** (2000). Alternative assessment as an ingredient of continuous assessment in junior secondary schools. *Journal of the Ghana Science Association*, 2 (1), 1-11.
- xv. **Amedeker, M. K.** (2000). Quarks: The fundamental particles. *Everyday Science for Schools*, 2 (1), 14 – 17.
- xvi. **Benjamin, M. A. and Amedeker, M. K.** (2000). The effect of the absence of selected mineral elements on the growth of maize seedling. *NATT RESEARCH SERIES –A journal publication of the Nigerian Association of Teachers of Technology*, 4 (1 & 2), 1 – 7.
- xvii. **Amedeker, M. K. and Benjamin, M. A.** (1999). Ethnoscience: Africa's contribution to World Science. *Mate Masie – Journal of the University College of Education, Winneba*, 1, 143 – 155.
- xviii. **Amedeker, M. K.** (1999). The changing attitudes towards girls' education in science in Ghana. *Ghana Journal of Education and Teaching (GHAJET)*, 1 (1), 141 – 151.
- xix. **Amedeker, M. K.** (2000). Popularising physics in our schools. *THE WEB (Winneba Educational Bulletin)*, 1 (8), 16 – 18.
- xx. **Amedeker, M. K.** (1999). Teaching and learning science in a superstitious society. *THE WEB (Winneba Educational Bulletin)*, 1 (6), 23 – 28.
- xxi. **Amedeker, M. K.** (1999). Ozone layer depletion: A problem for an entire planet. *THE WEB (Winneba Educational Bulletin)*, 1 (5), 12 – 14.
- xxii. **Amedeker, M. K.** (1999). Lasers: A great leap in scientific and technological development. *THE WEB (Winneba Educational Bulletin)*, 1 (4), 21 – 24.
- xxiii. **Amedeker, M. K.** (1998). The place of native language in science teaching and learning in the junior secondary schools in Ghana. *Journal of the Ghana Science Association*, 1 (1), 7 – 11.

- xxiv. **Amedeker, M. K.** (1998). The search for fundamental particles. *Everyday Science for Schools*, 1 (2), 21 – 24.
- xxv. **Benjamin, M. A. & Amedeker, M. K.** (1997). Teaching a model lesson to the child with hearing impairment in a regular junior secondary school classroom. *Ghanaian Journal of Special Education*, 1 (2), 34 – 38.

10. Publication in Book of Reading

Amedeker, M. K. (1999). Coping with the problem of low vision in a regular science class: A case study at the University College of Education, Winneba. *Pre-plan for Special Education service in Ghana in the 21ST Century*, 111 - 114.

11. Published Books

- i. **Amedeker, M. K., Anderson, I. K., Taale, K. D., & Boateng-Ennimful, E.** (2011). *Physics 2: University physics made simple*. Winneba: Institute for Educational Development and Extension
- ii. **Amedeker, M. K., Anderson, I. K., Taale, K. D., & Antwi, V.** (2011). *Physics 1: University physics made simple*. Winneba: Institute for Educational Development and Extension
- iii. **Amedeker, M. K., & K. D. Taale** (2011). *Research Methods in Science Education*. Winneba: Institute for Educational Development and Extension
- iv. **Amedeker, M. K. et al.** (2002). *Manual for teaching Psychosocial Life Skills*. Accra: Ministry of Education (CRDD)
- v. **Amedeker, M. K. et al.** (1998). *Measurement and Analysis*. Winneba: Institute for Educational Development and Extension

12. Research in Progress

- i. Confronting the new challenges of education reform in Ghana: Using continuous assessment to improve students' learning of junior high school science.
- ii. A search for science teachers' assessment pedagogical content knowledge: The case of Ghanaian junior high school science teachers practising continuous assessment.
- iii. Science teacher trainees' perceptions about their Information and Communication Technology skills: A study at the University of Education, Winneba, Ghana.

13. Appointment as Examiner for Post-Graduate Thesis Examination

- i. University of Education, Winneba as Internal Examiner for M. Ed. (Science Education), M. Phil. (Science Education), Ph. D. (Science Education) Examinations – 2008 – to date
- ii. University of Cape Coast, Cape Coast as External Examiner for M. Phil. (Science Education) Examinations- 2009/2010 – to date

14. Theses Supervised

- i. Name: John Klabi
Title: THE EFFECT OF LEARNING CYCLE TEACHING APPROACHES ON STUDENTS' CONCEPT DEVELOPMENT OF SELECTED TOPICS IN CHEMISTRY
Level: M. Ed. (Science)
Period: September, 2012 – In Progress
- ii. Name: Eric John Amegadzie
Title: CONCEPTUAL CHANGE APPROACH TO TEACHING SOME CONCEPTS IN JUNIOR HIGH SCHOOL INTEGRATED SCIENCE
Level: M. Ed. (Science)
Period: September 2012 – In progress
- iii. Name: John Yale
Title: USING CONCEPTUAL CHANGE APPROACH TO HELP STUDENTS UNDERSTANDING OF SOME SCIENCE CONCEPTS
Level: M. Ed. (Science)
Period: 2011 – In Progress
- iv. Name: Georgina Quaisie
Title: THE IMPACT OF THE SCIENCE RESOURCE CENTRES PROGRAMME IN GHANA
Level: Master of Philosophy (Science Education)
Period: 2011/2012 – In progress
- v. Name: Rachel Koranteng
Title: LEARNING WITH MULTIPLE REPRESENTATIONS: EFFECT ON THE PERFORMANCE OF STUDENTS IN THE STUDY OF SOME TOPICS IN PHYSICS
Level: Master of Philosophy (Science Education)
Period: 2011/2012 – 2012
- vi. Name: John Sam
Title: ASSESSING THE PERFORMANCE OF STUDENTS IN THE EFUTU MUNICIPALITY IN SCIENCE AT THE BECE FOR THE PAST FIVE YEARS
Level: M. Ed. (Science)
Period: 2010 – June, 2012
- vii. Name: Frank Osei Karikari
Title: THE CURRENT CONDITION OF SCIENCE TEACHING AND LEARNING AT THE SENIOR HIGH SCHOOL LEVEL: A CASE STUDY OF SELECTED SCHOOLS IN ASANTE AKIM SOUTH DISTRICT
Level: M. Ed. (Science)
Period: 2010 – In progress
- viii. Name of Student: Nathan Ohene Gyan
Title: PRE-SERVICE BASIC TEACHERS' SCIENCE KNOWLEDGE LEVEL, ATTITUDE TOWARDS AND EFFICACY BELIEFS OF SCIENCE TEACHING
Level: Master of Philosophy (Science Education)
Period: 2010/2011 – 2012

- ix. Name of student: Charles Badu
Title: ENHANCING THE PERFORMANCE OF SENIOR HIGH SCHOOL STUDENTS IN ASPECTS OF GENETICS USING SELF-LEARNING AND COOPERATIVE INSTRUCTIONAL STRATEGIES
LEVEL; Master of Philosophy (Science Education)
Period: 2009/2010 - 2011
- x. Name of student: Rosemary Azonu
Title: USING CONTINUOUS ASSESSMENT TO ENHANCE THE TEACHING AND LEARNING OF SCIENCE AT THE JUNIOR HIGH SCHOOL LEVEL
Level: Master of Philosophy (Science Education)
Period: 2008/2009 – September, 2009
- xi. Name of student: Nelson Odum
Title: THE STATUS AND QUALITY OF CONTINUOUS ASSESSMENT IN JUNIOR HIGH SCHOOL SCIENCE
Level: Master of Philosophy (Science Education)
Period: 2008/2009 – October 2009
- xii. Name of student: Amevor Asiwome, K.
Title: SCHOOL-BASED ASSESSMENT IN COLLEGES OF EDUCATION IN GHANA: IMPLICATIONS FOR STUDENTS' PERFORMANCE IN SCIENCE
Level: Master of Philosophy (Science Education)
Period: 2008/2009 – October, 2009
- xiii. Name of student: Kenneth Benjamin Hayford
Title: LIFE INSIDE A PROFESSIONAL DEVELOPMENT INSTITUTIONS: WHAT EXPERIENCES DO PRE-SERVICE TEACHERS LEARN?
Level: M. Ed. (Science)
Period: 2008 – In Progress
- xiv. Name of student: Emmanuel Owusu
Title: FACTORS AFFECTING TEACHERS' PARTICIPATION IN PROFESSIONAL LEARNING ACTIVITIES
Level: M. Ed. (Science)
Period: 2008 – June, 2011
- xv. Name of student: Mark Kwesi Eshun
Title: AN INVESTIGATION OF THE DIFFICULTIES EXPERIENCED BY STUDENTS IN SENIOR HIGH SCHOOL CHEMISTRY PRACTICAL
Level: M. Ed. (Science)
Period: 2008 – October, 2009
- xvi. Name of student: Geoffrey Yao Klutse
Title: A NOVEL APPROACH TO TEACHING AND LEARNING OF INTEGRATED SCIENCE IN JUNIOR HIGH SCHOOLS
Level: Master of Philosophy (Science Education)
Period: 2008/2009 – October, 2010
- xvii. Name of student: Louise Tsotso Kondoh
Title: STUDENTS' RESPONSE TO CONCEPTUAL QUESTIONS: A STUDY OF SOME CONCEPTS IN CHEMISTRY
Level; Master of Philosophy (Science Education)

- Period: 2008/2009 – October, 2010
- xviii. Name of student: Godwin, Tordzro
 Title: A COMPARATIVE STUDY OF BIOLOGY PRACTICAL LESSONS IN SOME SELECTED WELL-ENDOWED AND LESS-ENDOWED SENIOR HIGH SCHOOLS IN GHANA
 Level: Master of Philosophy (Science Education)
 Period: 2008/2009 – October, 2010
- xix. Name of Student: Vivian Uchechukwu Ajukwu
 Title: GHANAIAN SENIOR HIGH SCHOOL INTEGRATED SCIENCE STUDENTS' PERCEPTION OF ENERGY
 Level: Master of Philosophy (Science Education)
 Period: 2008/2009 – October, 2011
- xx. Name of student: Charles Essiam
 Title: EFFECTS OF REGULAR CLASSROOM TESTS ON LEARNING AND UNDERSTANDING OF CONCEPTS IN CHEMISTRY
 Level: Master of Philosophy (Science Education)
 Period: 2008/2009 – October, 2010
- xxi. Name of student: Frederick Sekyere Akosah
 Title: THE USE OF PROBLEM-BASED LEARNING APPROACH IN BALANCING REDOX EQUATIONS IN SENIOR HIGH SCHOOLS
 Level: Master of Philosophy (Science Education)
 Period: 2008/2009 – November, 2010

15. Ph. D. Thesis Supervision

- i. Name: Ruby Hanson
 Title: USE OF MICRO-CHEMISTRY EQUIPMENT TO STUDENTS' UNDERSTANDING OF CONCEPTS IN CHEMISTRY
 Awarding Institution: University of Education, Winneba, GHANA
 Level: Ph. D. (Science Education)
 Period: September, 2010 – In progress
- ii. Name of Student: Peter Attafuah
 Title: USING FAST FEEDBACK METHODS TO HELP STUDENTS' CONCEPTUAL UNDERSTANDING OF SOME SELECTED TOPICS IN CHEMISTRY AT THE SENIOR HIGH SCHOOL LEVEL
 Awarding Institution: University of Education, Winneba, GHANA
 Level: Ph. D. (Science Education)
 Period: September, 2010 – In progress

16. Theses/Dissertation Examined

- i. Name: Malik Agyei
 Title: THE STATUS AND QUALITY OF INTEGRATED SCIENCE TEACHING AND LEARNING IN GHANA

Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: June, 2012

- ii. Name: Abigail Fiona Dzidzinyo
Title: AN INVESTIGATION INTO WEAKNESSES COMMITTED BY SENIOR HIGH SCHOOL BIOLOGY STUDENTS DURING GRAPH WORK AND BIOLOGY DRAWING
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: January, 2012
- iii. Name: Courage Meteku
Title: THE EFFECT OF CONCEPT MAPPING STRATEGY ON STUDENTS' ACHIEVEMENT AND ATTITUDES TOWARD BIOLOGY
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: January, 2012
- iv. Name: Ernest Larbi
Title: THE EFFECT OF ALGEBRA TILES ON STUDENTS' PERFORMANCE IN ALGEBRA AT THE JUNIOR SCHOOL
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Mathematics Education)
Year of Examination: December, 2011
- v. Name: Mercy Nana Adjoa Asiamah
Title: ASSESSING SCIENCE PROCESS SKILLS IN BIOLOGY: A STUDY OF PRE-SERVICE TEACHERS IN TWO COLLEGES OF EDUCATION IN GHANA
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: November, 2011
- vi. Name: Emmanuel Larbi Appaw
Title: COMPARING CONCEPT MAPPING AND TRADITIONAL METHODS IN TEACHIING SOME SELECTED TOIPCS IN BIOLOGY AT THE SENIOR HIGH SCHOOL LEVEL IN GHANA
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: October, 2011
- vii. Name: Korsi Agbozo
Title: INVESTIGATING PROSPECTIVE TEACHERS' UNDERSTANDING OF THE CONCEPTS OF FRACTION: A CASE STUDY OF A COLLEGE OF EDUCATION IN GHANA

Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Mathematics Education)
Year of Examination: October, 2011

- viii. Name: Anthony Dadzie
Title: ASSESSING LABORATORY SKILLS OF SELECTED JUNIOR HIGH SCHOOL STUDENTS IN SELECTED INTEGRATED SCIENCE TOPICS
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: September, 2011
- ix. Name: Diana Asare Diabene
Title: ASSESSING SOME SELECTED SCIENCE PROCESS SKILLS IN INTEGRATED SCIENCE
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: September, 2011
- x. Name: Charles Amoah Agyei
Title: ASSESSING LABORATORY SKILLS OF ELECTIVE BIOLOGY STUDENTS IN SELECTED SENIOR HIGH SCHOOLS
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: August, 2011
- xi. Name: Kenneth Adu-Gyamfi
Title: SENIOR HIGH SCHOOL CHEMISTRY STUDENTS' UNDERSTANDING OF IUPAC NOMENCLATURE OF ORGANIC COMPOUNDS
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: July, 2011
- xii. Name: Anna Mwinbuabu Naah
Title: ASSESSING SENIOR HIGH SCHOOL SCIENCE STUDENTS' PLANNING SKILLS IN SELECTED TOPICS FROM THE SENIOR HIGH SCHOOL INTEGRATED SCIENCE SYLLABUS
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: May, 2011
- xiii. Name: Louis Atsiatorme
Title: EFFECTIVENESS OF THREE PEDAGOGICAL STRATEGIES IN ENVIRONMENTAL EDUCATION INSTRUCTION IN JUNIOR HIGH SCHOOLS IN GHANA
Awarding Institutions: University of Education, Winneba

Level: Ph. D. (Science Education)
Year of Examination: April, 2011

- xiv. Name of student: Sylvester Donkoh
Title: STUDENTS' AND TEACHERS' PERCEIVED DIFFICULTIES OF SENIOR HIGH SCHOOL ORGANIC CHEMISTRY
Awarding Institution: University of Cape Coast, Cape Coast. GHANA
Level: M. Phil. (Science Education)
Year of Examination: Feb/March, 2011
- xv. Name of Student: Ernest I. D. N. Ngaman-Wara
Title: GHANAIAN JUNIOR HIGH SCHOOL SCIENCE TEACHERS' ATTITUDE TOWARDS, KNOWLEDGE AND PRACTICE OF CONTEXTUALISED SCIENCE INSTRUCTION
Awarding Institution: University of Education, Winneba
Level: Ph. D. (Science Education)
Year of Examination: October, 2010
- xvi. Name of Student: Salifu Maigari Mohammed
Title: ASSESSING LABORATORY SKILLS OF PHYSICS STUDENTS FROM SELECTED SENIOR HIGH SCHOOLS IN SOME TOPICS IN MECHANICS AND OPTICS
Awarding Institution: University of Cape Coast, Cape Coast GHANA
Level: M. Phil. (Science Education)
Year of Examination: October, 2010
- xvii. Name of student: Joseph Yaw Enchill
Title: PRE-SERVICE TEACHERS' PERCEPTION OF ENVIRONMENTAL ISSUES IN COLLEGES OF EDUCATION IN BRONG AHAFO REGION
Awarding Institution: University of Education, Winneba, GHANA
Level: M. Ed. (Science Education)
Year of Examination: January, 2010
- xviii. Name of student: Godwin Kwame Aboagye
Title: COMPARISON OF LEARNING CYCLE AND TRADITIONAL TEACHING APPROACHES ON STUDENTS' UNDERSTANDING OF SELECTED CONCEPTS IN ELECTRICITY
Awarding Institution: University of Cape Coast, Cape Coast, GHANA
Level: M. Phil. (Science Education)
Year of Examination: August, 2009
- xix. Name of student: Thomas Kofi Asare-Gainson
Title: THE INFLUENCE OF RELIGION AND TRADITIONAL BELIEF SYSTEMS ON CHILDREN'S VIEWS ABOUT SCIENCE AND THEIR EFFECTS ON THE TEACHING AND LEARNING OF SCIENCE: A CASE STUDY AT SEFWI WIAWSO COMMUNITY JUNIOR HIGH SCHOOLS

Awarding Institution: University of Education, Winneba, GHANA
Level: M. Ed. (Science Education)
Year of Examination: 2009

- xx. Name of student: Fortune Addo-Wuwer
Title: ADDRESSING SENIOR SECONDARY SCHOOL STUDENTS' INTEGRATED SCIENCE GRAPH WORK PROBLEMS USING COMPUTER TUTORIALS
Awarding Institution: University of Education, Winneba, GHANA
Level: M. Phil. (Science Education)
Year of Examination: 2009
- xxi. Name of student: Alfred Issah Dinko
Title: MIM JUNIOR HIGH SCHOOL PUPILS' PERCEPTION OF THE RELEVANCE OF AIR POLLUTION ISSUES
Awarding Institution: University of Education, Winneba, GHANA
Level: M. Ed. (Science Education)
Year of Examination: 2009
- xxii. Name of student: Lewis Asare
Title: THE INTENTIONS OF SENIOR HIGH SCHOOL SCIENCE TEACHERS TO TEACH ABOUT HIV/AIDS, 2008
Awarding Institution: University of Education, Winneba, GHANA
Level: M. Phil. (Science Education)
Year of Examination: 2008
- xxiii. Name of student: Jonathan Samari
Title: INFLUENCE OF ENGLISH LANGUAGE EFFICIENCY ON SCIENCE PERFORMANCE AT THE JUNIOR HIGH SCHOOL
Awarding Institution: University of Education, Winneba, GHANA
Level: M. Phil. (Science Education)
Year of Examination: 2008

17. Conferences/Seminars and papers presented

- i. Evaluating the implementation of online science course delivery: Experiences of first-time Moodle users at the University of Education, Winneba – 23rd Society for Information Technology & Teacher Education Conference – Austin, Texas, USA, March 05 – 09, 2012
- ii. Evaluating the implementation of online science course delivery: Experiences of first time Moodle users at UEW. Faculty Seminar, UEW, February 08, 2012
- iii. Teaching with technology: Aiding science teacher trainees' conceptual understanding through collaborative teaching and use of computer datalogger – 22nd Society for Information Technology & Teacher Education Conference – Nashville, Tennessee, USA, March 07 – 11, 2011

- iv. Teaching with computers in under-resourced environment. Faculty Seminar, UEW, February 09, 2011
- v. Science teacher trainees' perceptions about Information and Communication Technology skills in the University of Education, Winneba, Ghana – ED-MEDIA 20101 World Conference on Educational Multimedia, Hypermedia & Telecommunications, Toronto, Canada, June 28 – July 02, 2010
- vi. Are UEW science teacher trainees prepared to meet the exigencies of the changes in the policies of course registration, checking examination results and assessments submissions? Faculty Seminar, UEW, Feb. 17, 2010
- vii. Can continuous assessment help to improve students' academic performance in junior high school integrated science? Held at Honolulu, 7th Hawaii Conference on Education, January 04 – 07, 2009
- viii. Basic electronics for Integrated Science Panel – presented at 50th National Workshop/Conference of Ghana Association of Science Teachers at Ho, September 01 - 06, 2008
- ix. Confronting the new challenges of education reform in Ghana: Using continuous assessment to improve students' learning of junior high school science, The 26th Annual Conference of the Association for Educational Assessment in Africa (AEAA) at La Palm Royal Beach Hotel, Accra – August 17 – 22, 2008
- x. Teacher professional development: Perspectives from Ghanaian junior secondary science teachers implementing continuous assessment - International Conference on Education, Economy and Society, Paris, France – July 16 – 19, 2008
- xi. Poster presentation: The status and quality of continuous assessment in junior secondary science in Ghana – Conference of the Western Australian Science Educators Association, Edith Cowan University, Perth, - November 30, 2006.
- xii. Prospects for implementing assessment for learning in Ghanaian junior secondary science – Faculty of Science Education Seminar, University of Education, Winneba. Ghana. - 24th February, 2006
- xiii. Backward photoproduction of ϕ mesons in Kp interactions – Institute of Theoretical Physics Seminar, Beijing - September, 2004
- xiv. On the coupling of ϕ meson to nucleons and backward ϕ production – Mentouri University, Constantine, Algeria 3 – 08 April, 2004
- xv. The Ghanaian primary School Pupils' Concept of Energy. West African Examinations Council Monthly Seminars, Accra. - 30th May, 2003.
- xvi. Deriving the differential cross-section formula using simple tree diagram, Institute of Theoretical Physics, Beijing, China. - Oct. 2002.
- xvii. Teaching and assessing affective skills in science in Ghanaian Basic Schools. West African Examinations Council Monthly Seminars, Accra - 23rd February, 2001.
- xviii. The Use of Computer-Aided Strategies for teaching physics in the Pre-tertiary institutions- presented at the 44th Annual National Conference of the Ghana Association of Science Teachers at Tamale - September, 2000.

- xix. Towards a theoretical framework for improving assessment in science in the junior secondary schools in Ghana. West African Examinations Council Monthly Seminars, Accra - 1st October, 1999.
- xx. Promoting Quality Science Teaching and Learning through alternative assessment: The case of the continuous assessment in junior secondary schools – presented at the 21st Biennial Conference of the Ghana Science Association – University of Ghana, Legon 8th – 13th August, 1999.
- xxi. Coping with the problem of low vision in a regular science class: A case study at University College of Education, Winneba – presented at 1st National Conference on Special Education at Winneba – August 1998.
- xxii. The Place of Native Language in science teaching and learning in the Junior Secondary Schools in Ghana – presented at the 20th Biennial Conference of the Ghana Science Association at the Kwame Nkrumah University of Science and Technology, Kumasi - August, 1997.
- xxiii. The role of physics in a developing industrial world presented at the 36th Annual National Conference of the Ghana Association of Science Teachers conference at Ho - September, 1992.

18. Citation

- i. Honour of the sterling leadership quality as a Dean of the Faculty of Science Education, University of Education, 2010 – 2011, Academic Year. Given by Faculty of Science Education Students' Association on April 30, 2011
- ii. In Honour of active participation in the Conferences of Special Education, contributions towards publications in the Journal of Special Education and introducing science teaching to people with disabilities From Association of Special Education Students, University College of Education, - Winneba (1999).

19. Membership of Professional Associations

- i. Institute of Physics with Chartered Physics status (U.K) - since 1997
- ii. Ghana Science Association (GSA)- since 1996
- iii. Ghana Association of Science Teachers (GAST) - since 1983

20. Workshops Attended

- i. Senior Academic Leadership Training (SALT II) Workshop by NCTE & Carnegie Corporation of New York at GIMPA, Accra, from 02 – 06 July, 2012
- ii. National Accreditation Board Stakeholders' Workshop by NAB in Accra, March 14, 2012
- iii. International Workshop on Science Education by INEES at Flensburg, Germany, February 11 – 18, 2012
- iv. Courseware Development Workshop, UEW, Winneba, January 25- 27, 2012
- v. Mentoring Workshop by Gender Mainstreaming Directorate, UEW, Winneba March 23, 2011
- vi. International Workshop on Science Education by INEES at Dhaka, Bangladesh, February 14 – 18, 2011

- vii. International Workshop on Science Education by INEES at Ocho Rios, Jamaica, October 02 – 09, 2010
- viii. Workshop for UEW Deans, Directors, Heads of Department on Administration Management in Higher Education, Elmina Beach Resort, Elmina, Oct., 19 -20, 2010
- ix. Fifth Council for Advancement and Support of Education (CASE) in Africa Workshop/Conference, Accra, Ghana, October 06 – 08, 2009
- x. Workshop for UEW Deans and Directors on Financial Management in Higher Education, Elmina Beach Resort, Elmina, Sept., 24 – 26, 2009
- xi. Workshop for Course Manual Writing at Manna Heights, Mankessim, September 02 - 04, 2009
- xii. Workshop for Project Management Training II at Elmina Beach Resort, Elmina, August, 11- 13, 2009
- xiii. Workshop for drafting Strategic Development Plan for SACOST Centre at Manna Heghts, Mankessim, June 22 – 24, 2009
- xiv. Training Workshop for ICT Courseware Developers and Managers at Manna Heights, Mankessim, June 03 – 06, 2009
- xv. Workshop on Special M. Ed. curriculum development for Colleges of Education at Manna Heights Mankessim, February 25 – 28, 2009
- xvi. Workshop on Project management Training organised by PRACTICAL Project, January 12, - 16, 2009 at Cape Coast
- xvii. Workshop for editing Distance Learning materials – From October 19 – 23, 2008 at Koforidua, Ghana
- xviii. Workshop on science and mathematics education in the specialised colleges of education October 12 – 16, 2008 at Royal Atlantic Resort, Aplaku
- xix. NPT Programme 155 PRACTICAL- strengthening Mathematics and Science Teacher Training Workshop – June 28 – July 12, 2008, Organised by Vrije University of Amsterdam, at Utrecht, The Netherlands.
- xx. Practical Project Workshop on development of course manual– June 09 - 11, 2008 at the University of Cape Coast, Ghana.
- xxi. International Foundation for Science Grant Proposal Writing Seminar – April 04, - April 11, 2008 at University of Education, Winneba
- xxii. Second Content Development Initiative Workshop for Website development – March 03 – 05, 2008 at University of Education, Winneba
- xxiii. Workshop/Conference on Meson and Nucleon Physics, Institute of High Energy Physics - Beijing, China, 31st July to 4th August, 2004
- xxiv. Conference on Harnessing Science Research and Technology for National Development –Accra International Conference Centre 15-19 March, 2004
- xxv. African Summer Theory Institute – Cape Town, South Africa (Summer School), Jan. 9 – 31, 2004
- xxvi. Training workshop for Designing Modules for training JSS teachers in teaching Life Skills in science- sponsored by Ghana Education Service, Akropong-Akwapim, Ghana - Oct/Nov. 1999
- xxvii. Regional College on Optics education for Tertiary Level Teachers and Researchers at University of Cape Coast, Cape Coast, Ghana sponsored by Abdus Salaam Institute of Theoretical Physics, Trieste, April, 1999

- xxviii. Workshop for Instructional Design and Editing of Distance Education materials- sponsored by Simon Fraser University, U.S.A., at Winneba, Nov. 1998
- xxix. STAG Project Development Workshop sponsored by AFCLIST, Winneba Oct. 1998
- xxx. Seminar/Workshop for Universities Research Funded Researchers at - STEPRI, Accra, Feb. 1998
- xxxi. Training Workshop for Hall Counsellors, Winneba, Nov. 1997
- xxxii. New Year School – Organised by Institute of Adult Education (Legon) - Jan. 1997
- xxxiii. Workshop for Distance Education Materials Writing, Winneba July, 1995
- xxxiv. Test Item Writers Workshop- West African Examinations Council sponsored, Winneba August, 1991
- xxxv. Second West African Physics Teachers workshop at Ibadan, Nigeria- Ghana Association of Science Teachers sponsored, Sept., 1991
- xxxvi. Trainer of Trainers Workshop –Primary Science Ghana Education Service sponsored, Ajumako, July, 1991
- xxxvii. Trainer of Trainers Workshop – J.S.S. Science Teaching Ghana Education Service sponsored, Ajumako - Jan. 1990

21. Administrative Experience

- i. Hall Fellow – University Hall (formerly GETFund), University of Education, Winneba, 2012/2013 Academic year
- ii. Hall Fellow – University Hall (formerly GETFund), University of Education, Winneba, 2011/2012 Academic Year
- iii. Dean, Faculty of Science Education, University of Education, Winneba, Ghana. September 01, 2010 – August 31, 2013
- iv. Ag. Dean, Faculty of Science Education, University of Education, Winneba, Ghana. Sept 01, 2009 to August 31, 2010
- v. Hall Fellow- Simpa Hall, University of Education, 2010/2011 Academic Year
- vi. Head, Department of Science Education, University of Education, Winneba, Ghana, Sept., 01, 2008 – August 31, 2009
- vii. Ag. Head, Department of Science Education, University of Education, Winneba, Ghana, 2002/2003 - 2003/2004
- viii. Departmental Examination Officer, 1996 – 2001
- ix. Departmental Time Table Officer, 1996 – 2001
- x. Hall Counsellor, AMU Hall, University of Education, 1996-1998
- xi. Departmental Staff Secretary Advanced Teacher Training College, Winneba. 1984 – 1987
- xii. Chairman, Transport Committee, Advanced Teacher Training College, Winneba. 1989 – 1992
- xiii. Hall Warden, Nana Ghartey Hall, Advanced Teacher Training College, Winneba. 1989 -1992
- xiv. Assistant National Secretary, Ghana Association of Science Teachers, 1986- 1992
- xv. Regional Chairman, Central Region, Ghana Association of Science Teachers, 1984 – 1986

- xvi. Hall Warden, Kotoka Hall, Advanced Teacher Training College, Winneba, 1984 - 1986
- xvii. Sectional Head (Physics), Department of Science Advanced Teacher Training College, Winneba. 1983 – 1987

22. Experience in Editing and Reviewing Journal Articles

- i. Reviewer, Journal of *Educational Development and Practice (JED-P)* of Institute of Education, University of Cape Coast, Ghana – June 2011 to present
- ii. Edited 2 Units IEDE book (PSC 501 – PHYSICS 2 _ University Physics Made Easy) – April, 2010.
- iii. Edited entire IEDE book (ISC 511 – Energy – Four Units) – March, 2010
- iv. Reviewer, Journal of Research and Development in Education, March, 2010
- v. Editing distance learning materials for IEDE, from 2008 –present
- vi. Edited articles for World Conference on Science & Technology Education, ICASE 2007, to be held in Perth, Australia, 8 – 12 July, 2007
- vii. Writer and Editor, Distance Education materials, 1995 – 2001
- viii. Science Editor, Nyansapow Journal for Pre-University science students, 1996 - 1997

23. University Committees Served On

- i. Member, Finance Committee, Academic Board Representative, 2012/2013- 2013/2014 Academic year
- ii. Member, Committee to investigate impropriety in submission of published papers for promotion in the University of Education, Winneba - June, 2012
- iii. Chairman, Committee to investigate theft case at Maputo Court, Ghana Hostels, involving a student – May, 2012
- iv. Chairman, Committee to draft Risk Management Policy for University of Education, Winneba, December, 2011
- v. Chairman, Committee to draft the curriculum of the Health Education programme for the Department of Health, Physical Education, Recreation and Sports, University of Education, Winneba, August, 2011
- vi. Member, Committee to draft policy on journal publication in the University of Education, Winneba, June, 2011
- vii. Chairman, Committee to investigate unlawful entry into a students' online portal by a colleague at UEW, April, 2011
- viii. Chairman, Committee to produce draft policy document on students' elections at UEW, March, 2011.
- ix. Chairman, Committee to produce recommendations for relocation of the North Campus Market at UEW, January, 2011
- x. Member, Committee to study document on setting up two public Universities (UNER & UHAS), August, 2010
- xi. Chairman, Farm Management Committee, UEW, 2010 - 2012
- xii. Member, Committee to investigate doctoring of procurement document, Feb, 2010

- xiii. Member, Committee to investigate reported non-performance of UEW graduates in the pre-tertiary schools, Dec., 2009 – March, 2010
- xiv. Member, Finance Committee, Academic Board Representative, 2009/10-2011/2012 Academic year
- xv. Chairman, Committee to investigate reported grade discrepancies in papers written in Akan-Nzema, September 16 – 24, 2009
- xvi. Chairman, Disciplinary Committee to prescribe punishment for Embezzlement of Funds, June, 2009
- xvii. Member, Finance and Development Planning Committee – 2009/2010 Academic year
- xviii. Member, Implementation Committee, Teacher Education in Sub-Saharan Africa, (TESSA) April, 2009 – to date
- xix. Member of the University of Education, Winneba, Academic Board, 2008/2009 academic year
- xx. Member of Faculty Board, Faculty of Science Education, University of Education, Winneba, 2008/2009 to 2012/2013 academic years
- xxi. Member of University of Education Academic Board, 2002/2003 & 2003/2004 2008/2009 to 2012/2013 academic years
- xxii. Member, University Estate Management Committee - Oct. 2003 - Feb. 2005
- xxiii. Member, University Committee to investigate Admissions Malpractice - Oct., 2003
- xxiv. Chairman, University Committee to investigate Examinations Malpractice Sept. 2003.
- xxv. Chairman, Senior Members and Senior Staff Association (SEMSA), University of Education, Winneba, 1999 – 2001
- xxvi. Board Member, UCEW WINDY BAY F.M. RADIO, 1999- 2001
- xxvii. Member, Committee for restructuring of academic programmes - Sept. 2000
- xxviii. Member, Education Sector analysis Committee – University College of Education, Winneba, Ghana - Sept. 1998
- xxix. Member, Sub-Committee on Free Compulsory Universal Basic Education - Academic Board Appointment - Feb. 1996
- xxx. Board Member - Faculty of Science Education, University College of Education, Winneba. Ghana - 1995 – 1996

24. National Committees Served On

- i. University of Education Representative on Ghana Examinations Committee at WAEC, January 2011 – December 2014
- ii. Ministry of Environment, Science and Technology sub-committee to select students for MASTESS Scholarship Scheme January, 2011
- iii. Chairman, Board of Governors, St. Kizito Senior High/Technical School, Mepe, Volta Region, Ghana – November 05, 2010 – 2013
- iv. University of Education Representative on National Accreditation Board's Institutional Quality Assurance panel – April, 2010 - 2012
- v. University of Education's Representative - Working Committee of the Ghana Academy of Arts and Sciences, 1998 – 2001

- vi. Member, National Working Panel to review the WASSCE Core Science Syllabus –appointment by West African Examinations Council - June, 2001
- vii. Member, Working Committee to compile the Integrated Science Syllabus for Senior Secondary Schools – West African Examinations Council sponsored - May, 1998
- viii. Member, Working Committee to Review the Junior Secondary School Science Syllabus – Ghana Education Service sponsored, July/Aug. 1997

25. Interests and Hobbies

- Gardening/Observing nature
- Swimming

26. Research Interests

- i. Integration of assessment with instruction for supporting students' learning of science
- ii. Assessment and Evaluation
- iii. Teacher professional development
- iv. Teaching science in deprived schools: Basic and Secondary schools
- v. Teacher Education/Physics Education
- vi. Backward meson production
- vii. Photo-production of mesons and coupling of mesons to nucleons

27. Referees

- 1. Prof. A. Asabere-Ameyaw
Vice-Chancellor, UEW
- 2. Prof. Mawutor Avoke
Pro-Vice Chancellor, UEW
- 3. Prof. Francis A. Joppa
Consultant, Department of French Education, UEW

Signed..

